

IN THE CLAIMS:

1.-36. (Cancelled)

37. (Currently Amended) A program receiver for displaying a graphical-interactive picture by receiving a program transmitted from a program transmitter, ~~said~~ the program receiver comprising:

5 signal receipt means for receiving a signal transmitted from ~~said~~ the program transmitter, ~~said~~ the signal being a multiplex signal including a program and a graphical-interactive-picture-structure specification data specifying, by a script, a structure of the graphical interactive picture;

10 signal separation means for separating the signal received by ~~said~~ the signal receipt means into a program signal and a graphical-interactive-picture-structure specification data signal;

storage means for storing a plurality of basic picture elements in advance, the plurality of basic picture elements being figures composing the graphical interactive picture;

15 first graphical interactive picture generation means for generating the graphical interactive picture based on the graphical-interactive-picture-structure specification data signal from ~~said~~ the signal separation means by combining the basic picture elements stored in the storage means; and

 display means for displaying the graphical interactive picture generated by ~~said~~ the first graphical interactive picture generation means.

38. (Currently Amended) The program receiver of Claim 37 wherein further comprising:

~~storage means for storing a plurality of basic picture elements in advance, said the~~
~~plurality of basic picture elements being figures composing the graphical interactive picture~~
5 ~~manipulated by a user and said the basic picture elements being are identified by identifiers; and~~
~~first graphical interactive picture generating means for generating the graphical~~
~~interactive picture by combining the basic picture elements stored in said storage means.~~

39. (Currently Amended) The program receiver of Claim 38 further comprising:

interactive manipulation means for inputting manipulation to the graphical
interactive picture displayed by ~~said the~~ display means;

basic action storage means for storing a content of an action for updating the
5 ~~graphical-interactive-picture-structure~~ specification data; and

second graphical interactive picture generation means for retrieving the content of
the action from ~~said the~~ basic action storage means based on action information directing an
update of the graphical interactive picture upon receipt of the input manipulation from ~~said the~~
interactive manipulation means to update the ~~graphical-interactive-picture-structure~~ specification
10 data to generate an updated graphical interactive picture.

40. (Currently Amended) The program receiver of Claim 39, wherein ~~said the~~ first
graphical interactive picture generation means includes:

a receipt decode unit for receiving the graphical interactive-picture-structure
specification data signal from ~~said the~~ signal separation means to decode the same:

5 a storage unit for storing decoded graphical interactive-picture-structure
specification data from ~~said the~~ receipt decode unit, the graphical interactive-picture-structure
specification data being composed of a panel object definition including a plurality of pieces of

panel object information, an action definition including a plurality of pieces of action information, and a shape definition including a plurality of pieces of shape information;

10 a first process unit for retrieving the graphical interactive-picture-structure specification data from said the storage unit, extracting the basic picture elements corresponding to the identifier by referring to the shape information from said the storage unit in accordance with the retrieved graphical-interactive-picture-structure specification data, and for placing the extracted basic picture elements by referring to the panel object information; and

15 a first display control unit for controlling the display means to display the basic picture elements placed by said the first process unit as the graphical interactive picture.

41. (Currently Amended) The program receiver of Claim 40 wherein said the interactive manipulation means includes:

an input manipulation acceptance unit for accepting a user's input manipulation to the graphical interactive picture; and

5 an interactive signal transmission unit for transmitting the input manipulation accepted by said the manipulation acceptance unit to said the second graphical interactive picture generation unit as an interactive signal; and

wherein said the second graphical interactive picture generation means includes:

10 an interactive signal receipt unit for receiving the interactive signal from said the interactive signal transmission unit;

an interactive signal interpretation unit for interpreting the interactive signal receipt unit; a graphical-interactive-picture-structure specification data update unit for retrieving a content of an action from said the basic action storage means in accordance with the interactive

signal interpreted by ~~said~~ the interactive signal interpretation unit to update the graphical-
15 interactive picture-structure specification data in ~~said~~ the storage unit;

a second process unit for retrieving updated graphical-interactive-picture structure specification data from ~~said~~ the storage unit and for extracting the basic picture elements corresponding to the identifier from ~~said~~ the storage means to place the extracted display elements; and

20 a second display control unit for controlling ~~said~~ the display means to display the basic picture elements placed by ~~said~~ the second process unit as an updated graphical interactive picture.

42. (Currently Amended) The program receiver of Claim 41 further comprising information transmission means for transmitting the data of the graphical interactive picture updated by ~~said~~ the interactive manipulation means to ~~said~~ the program transmitter.

43. (Currently Amended) The program receiver of Claim 40 further comprising information transmission means for transmitting the data of the graphical interactive picture updated by ~~said~~ the interactive manipulation means to ~~said~~ the program transmitter.

44. (Currently Amended) The program receiver of Claim 40 further comprising information record means for outputting data related to the graphical interactive picture as per manipulation from ~~said~~ the interactive manipulation means to make a record thereof.

45. (Currently Amended) The program receiver of Claim 39 further comprising information record means for outputting data related to the graphical interactive picture as per manipulation from ~~said~~ the interactive manipulation means to make a record thereof.

46. (Currently Amended) The program receiver of Claim 40, wherein ~~said~~ the graphical-interactive picture-structure specification data further includes a class definition including a plurality of pieces of class attribute information.

47. (Currently Amended) The program receiver of Claim 37 further comprising:
interactive manipulation means for inputting manipulation to the graphical interactive picture displayed by ~~said~~ the display means;

basic action storage means for storing a content of an action for updating the
5 graphical interactive-picture-structure specification data; and

second graphical interactive picture generation means for retrieving the content of the action from ~~said~~ the basic action storage means based on action information directing an update of the graphical interactive picture upon receipt of the input manipulation from ~~said~~ the interactive manipulation means to update the graphical-interactive-picture-structure specification
10 data to generate an updated graphical interactive picture.

48. (Previously Presented) A method of synthesizing a menu comprising the steps of:
a menu information receiving step for receiving a plurality of menu information from a plurality of appliances; and

a menu synthesizing step for synthesizing the plurality of menu information
5 received by the menu information receiving step in accordance with a synthesizing rule.

49. (Currently Amended) A program receiver for displaying a graphical-interactive picture by receiving a program transmitted from a program transmitter, ~~said~~ the program receiver comprising:

a signal receipt unit ~~operable to receive~~ receiving a signal transmitted from said
5 the program transmitter, said the signal being a multiplex signal including a program and a
graphical-interactive-picture-structure specification data specifying, by a script, a structure of the
graphical interactive picture;

a signal separation unit ~~operable to separate~~ separating the signal received by said
the signal receipt unit into a program signal and a graphical-interactive-picture-structure
10 specification data signal;

a storage unit storing a plurality of basic picture elements in advance, the plurality
of basic picture elements being figures composing the graphical interactive picture;

a first graphical interactive picture generation unit ~~operable to generate~~ generating
the graphical interactive picture based on the graphical-interactive-picture-structure specification
15 data signal from said the signal separation unit by combining the basic picture elements stored in
the storage unit; and

a display unit ~~operable to displaying~~ the graphical interactive picture generated by
said the first graphical interactive picture generation unit and a program picture from the
program signal.

50. (Currently Amended) The program receiver of Claim 49 wherein further
comprising:

~~a storage unit operable to store a plurality of basic picture elements in advance,~~
~~said plurality of basic picture elements being figures composing the graphical interactive picture~~
5 ~~manipulated by a user and said~~ the basic picture elements ~~being~~ are identified by identifiers; and

~~a first graphical interactive picture unit operable to generate the graphical interactive picture by combining the basic picture elements stored in said storage unit.~~

51. (Currently Amended) The program receiver of Claim 50 further comprising:

an interactive manipulation unit operable to input a manipulation to the graphical interactive picture displayed by ~~said~~ the display unit;

a basic action storage unit operable to store content of an action for updating the graphical interactive-picture-structure specification data; and

a second graphical interactive picture generation unit operable to retrieve the content of the action from ~~said~~ the basic action storage unit based on action information directing an update of the graphical interactive picture upon receipt of the input manipulation from ~~said~~ the interactive manipulation unit to update the graphical-interactive-picture-structure specification data to generate an updated graphical interactive picture.

52. (Currently Amended) The program receiver of Claim 51, wherein ~~said~~ the first graphical interactive picture generation unit includes:

a receipt decode unit operable to receive the graphical interactive-picture-structure specification data signal from ~~said~~ the signal separation means to decode the same:

a storage unit operable to store decoded graphical interactive-picture-structure specification data from ~~said~~ the receipt decode unit, the graphical interactive-picture-structure specification data being composed of a panel object definition including a plurality of pieces of panel object information, an action definition including a plurality of pieces of action information, and a shape definition including a plurality of pieces of shape information;

- 10 a first process unit operable to retrieve the graphical interactive-picture-structure specification data from ~~said~~ the storage unit, extracting the basic picture elements corresponding to the identifier by referring to the shape information from ~~said~~ the storage unit in accordance with the retrieved graphical-interactive-picture-structure specification data, and for placing the extracted basic picture elements by referring to the panel object information; and
- 15 a first display control unit operable to control the display unit to display the basic picture elements placed by ~~said~~ the first process unit as the graphical interactive picture.

53. (Currently Amended) The program receiver of Claim 52 wherein ~~said~~ the interactive manipulation unit includes:

- an input manipulation acceptance unit operable to accept a user's input manipulation to the graphical interactive picture; and
- 5 an interactive signal transmission unit operable to transmit the input manipulation accepted by ~~said~~ the manipulation acceptance unit to ~~said~~ the second graphical interactive picture generation unit as an interactive signal; and
- wherein ~~said~~ the second graphical interactive picture generation means includes:
- an interactive signal receipt unit operable to receive the interactive signal from
- 10 ~~said~~ the interactive signal transmission unit;
- an interactive signal interpretation unit operable to interpret the interactive signal receipt unit; a graphical-interactive-picture-structure specification data update unit for retrieving a content of an action from ~~said~~ the basic action storage means in accordance with the interactive signal interpreted by ~~said~~ the interactive signal interpretation unit to update the graphical-
- 15 interactive picture-structure specification data in ~~said~~ the storage unit;

a second process unit operable to retrieve updated graphical-interactive-picture structure specification data from said the storage unit and for extracting the basic picture elements corresponding to the identifier from said the storage means to place the extracted display elements; and

20 a second display control unit operable to control said the display unit to display the basic picture elements placed by said the second process unit as an updated graphical interactive picture.

54. (Currently Amended) The program receiver of Claim 53 further comprising an information transmission unit operable to transmit the data of the graphical interactive picture updated by said the interactive manipulation unit to said the program transmitter.

55. (Currently Amended) The program receiver of Claim 52 further comprising an information transmission unit operable to transmit the data of the graphical interactive picture updated by said the interactive manipulation unit to said the program transmitter.

56. (Currently Amended) The program receiver of Claim 52 further comprising an information record unit operable to output data related to the graphical interactive picture as per manipulation from said the interactive manipulation unit to make a record thereof.

57. (Currently Amended) The program receiver of Claim 51 further comprising an information record unit operable to output data related to the graphical interactive picture as per manipulation from said the interactive manipulation unit to make a record thereof.

58. (Currently Amended) The program receiver of Claim 52, wherein ~~said~~ the graphical-interactive picture-structure specification data further includes a class definition including a plurality of pieces of class attribute information.

59. (Currently Amended) The program receiver of Claim 49 further comprising:
an interactive manipulation unit operable to input a manipulation to the graphical interactive picture displayed by ~~said~~ the display unit;

a basic action storage unit operable to store content of an action for updating the
5 graphical interactive-picture-structure specification data; and

a second graphical interactive picture generation unit operable to retrieve the content of the action from ~~said~~ the basic action storage unit based on action information directing an update of the graphical interactive picture upon receipt of the input manipulation from ~~said~~ the interactive manipulation unit to update the graphical-interactive-picture-structure
10 specification data to generate an updated graphical interactive picture.